

ABSTRACT OF THE DISCLOSURE

In a process of forming a silicon oxide film 116 that constitutes an interlayer insulating film with TEOS as a raw material through the plasma CVD method, the RF output is oscillated at 50 W, and the RF output is gradually increased from 50 W to 250 W (an output value at the time of forming a film) after discharging (after the generation of O<sub>2</sub>-plasma). A TEOS gas is supplied to start the film formation simultaneously when the RF output becomes 250 W, or while the timing is shifted. As a result, because the RF power supply is oscillated at a low output when starting discharging, a voltage between the RF electrodes can be prevented from changing transitionally and largely.